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Obstructive Lung Diseases

THE EFFECT OF CONJUGATED LINOLEIC ACID ON THE SERUM LEVEL OF LEPTIN IN COPD PATIENTS

S. MATIN*[1] H. GHOBADI[2] AND A. NEMATI[3] [1]ARDABIL UNIVERSITY OF MEDICAL SCIENCES, INTERNAL MEDICINE, ARDABIL, IRAN [2]ARDABIL UNIVERSITY OF MEDICAL SCIENCES, PULMONOLOGY, ARDABIL, IRAN [3]ARDABIL UNIVERSITY OF MEDICAL SCIENCES, NUTRITION, ARDABIL, IRAN

PURPOSE: Chronic Obstructive Pulmonary Disease (COPD) accompanied by systemic inflammations and is characterized by irreversible airflow limitations. Leptin is a cytokine with pre-inflammatory effect. However, there are no studies investigating the effect of Conjugated Linoleic Acid (CLA) on the serum leptin in COPD patients. Therefore, the present study aimed to explore the effect of CLA on the serum leptin in COPD patients.

METHODS: This interventional study was conducted on 90 COPD patients. The patients randomly were divided into two groups (supplement and placebo), each consisting of 45 patients. After obtaining written consent from the patients and recording their demographic characteristics, the spirometry was conducted and CAT score was calculated. Moreover, blood sample was collected from each of themin order to analyze their serum leptin. After that, the patients in the supplement group were administered with 3.2 g/day of CLA for 6 weeks. The patients in the other group received placebo. After the intervention, spirometry, CAT score calculation and blood sampling were conducted once againfor all of the patients and the results obtained were analyzed.

RESULTS: In the supplement group, a significant decrease was observed both in the serum leptin and in CAT score after the intervention ($p<0.05$). Moreover, the FEV1 levels increased significantly in the supplement group after the intervention ($p<0.05$). Although, the difference between the two groups were not significant.

CONCLUSIONS: The use of CLA supplement can improve COPD patients' quality of life through decreasing the serum level of leptinin their blood.

CLINICAL IMPLICATIONS: effective

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